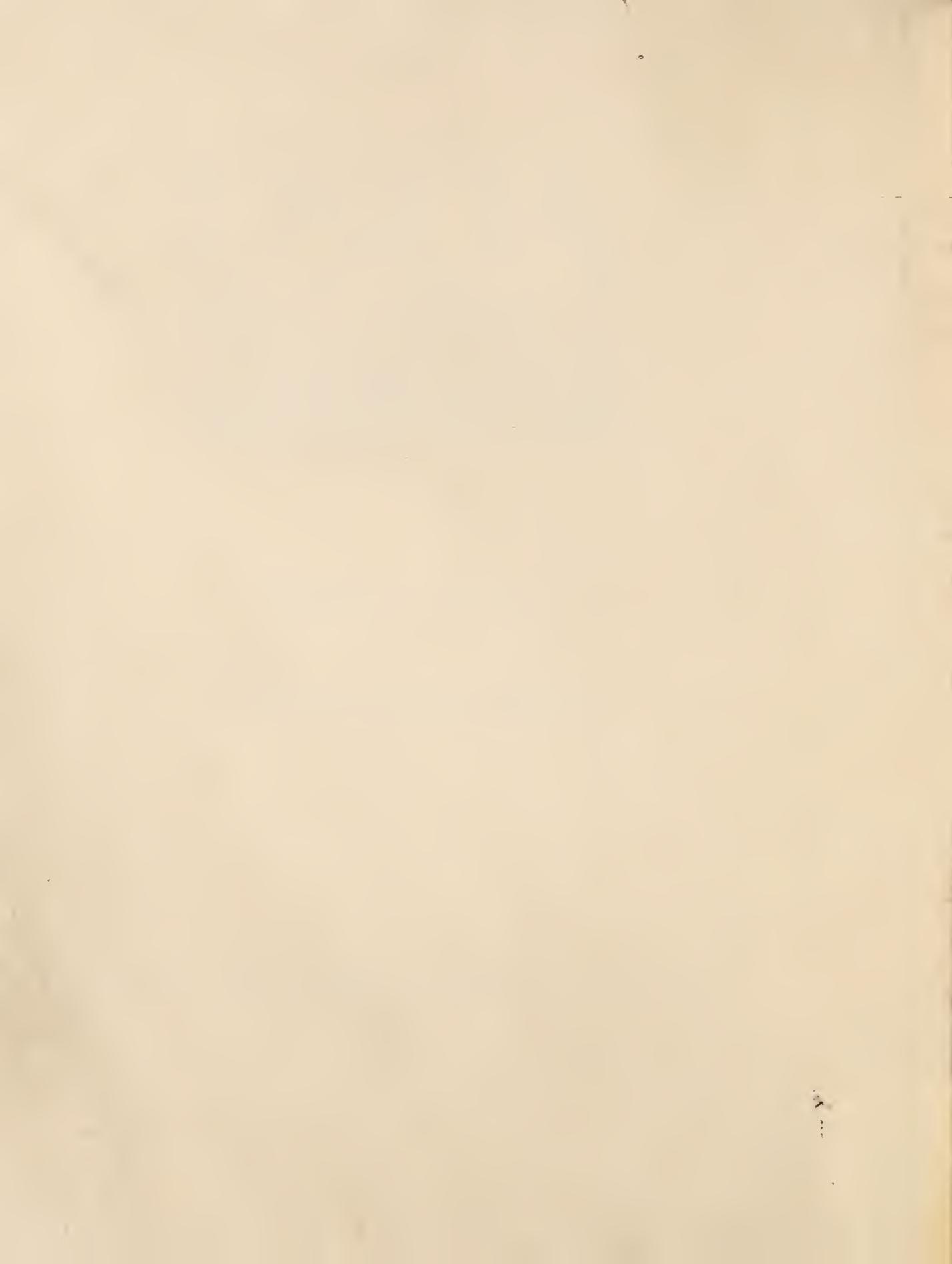


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VEGETABLE Situation



Table 1.--Vegetables and melons for fresh market: Reported commercial acreage and production of principal crops, selected seasons, 1968, 1969, and indicated 1970

Seasonal group and crop	Acreage				Production			
			1970				1970	
	1968	1969	Indicated	Per centage of 1969	1968	1969	Indicated	Per centage of 1969
: - - - 1,000 acres - - -								
Winter 1/	213.4	246.0	235.6	96	36,368	38,629	36,295	94
Spring 1/	510.7	517.9	494.9	96	50,876	50,623	47,771	94
Summer:								
Beans, snap	22.0	22.0	21.9	100	954	913	980	107
Cabbage 1/	19.0	18.2	18.4	101	3,997	3,940	3,885	99
Cantaloups 2/	59.1	67.3	64.6	96	8,103	7,958	8,202	103
Carrots 1/	9.9	8.0	10.4	130	3,509	2,570	3,461	135
Cauliflower 1/	1.8	1.6	1.6	100	180	136	160	118
Celery 1/	7.5	7.0	6.9	99	3,385	3,103	3,025	97
Corn, sweet	110.3	111.7	110.5	99	7,419	7,368	7,441	101
Cucumbers	10.2	9.9	10.5	105	973	980	985	101
Eggplant	1.3	1.4	1.4	100	169	196	182	93
Escarole	2.2	2.2	2.2	100	310	299	298	100
Garlic	6.4	7.3	5.6	77	800	876	644	74
Honeydews	8.0	10.3	10.6	103	1,211	1,706	1,608	94
Lettuce	45.4	47.4	47.8	101	11,873	11,823	11,965	101
Onions 1/ 2/	15.0	12.6	11.0	87	3,262	2,942	2,576	88
Peppers, green 1/ 2/	8.6	8.8	9.8	111	334	325	363	112
Spinach	1.1	1.1	.9	82	77	77	59	77
Tomatoes 2/	46.2	43.3	46.2	107	5,422	5,452	5,643	104
Watermelons	217.6	217.8	220.1	101	18,513	18,345	19,279	105
Total summer on which acreage and production have been reported	591.6	597.9	600.3	100	70,491	69,009	70,756	103
Acreage has been reported	700.3	705.2	707.8	100	---	---	---	---
Fall:								
Cabbage 1/								
Early	29.1	30.7	32.6	106	8,980	8,745	---	---
Late	2.0	2.1	2.4	114	268	334	---	---
Carrots, early 1/	24.4	24.7	24.1	98	7,066	6,788	---	---
Total fall on which acreage has been reported	55.5	57.5	59.1	103	16,314	15,867	---	---
Total on which 1970: Acreage and production have been reported	1,315.7	1,361.8	1,330.3	96	157,735	158,261	154,822	98
Acreage has been reported	1,479.9	1,526.6	1,497.4	98	---	---	---	---

1/ Includes processing.

2/ Does not include late summer cantaloups, onions, green peppers, and tomatoes.

Vegetables-Fresh Market, SRS, USDA, issued monthly.

THE VEGETABLE SITUATION

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Approved by
The Outlook and Situation Board
July 29, 1970

The summary of this report
was also released on the
above date

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The Vegetable Situation is published in February,
May, August, and November.

SUMMARY

Fresh vegetable supplies are expected to be slightly larger this summer and both cantaloup and watermelon supplies are up moderately. Indicated production of carrots is up substantially while early-summer onion production is down materially. But for other major crops, only slight to moderate changes are expected. With this supply pattern, and strong consumer demand, fresh vegetable prices may average the same as or slightly higher than a year earlier.

Processing vegetable acreage has been reduced again this year, as the industry continues to bring supplies down from the high levels of the past 2 seasons, and into closer balance with anticipated trade requirements. More sauerkraut is expected to be packed from a larger contract acreage, more winter and spring spinach has been packed, and snap bean production may be about the same as last year. But a tenth smaller pea crop has been forecast, and except for pickle acreage which is down slightly, planted acreage of other important vegetables ranges from moderately to substantially lower than a year ago. With smaller prospective supplies and strong consumer demand, wholesale prices for processed vegetables will average at least moderately above the relatively low levels of the previous 2 seasons.

Potato production for early summer probably will be down a tenth this year, and prices the first 2 weeks of July were substantially above a year earlier. Prices likely will hold above average through August. Indicated potato acreage for fall harvest is up 3 percent from last year, and 9 percent above the 1964-68 average. Practically all the increase is in Washington, Oregon, and Idaho.

Sweetpotato production is expected to be down about a tenth this year. Acreage planted is down 2 percent and indicated yields are lower. Prices this fall are likely to average somewhat above those of a year earlier. Quantities processed probably will not equal those of the 1969/70 season.

Dry bean supplies in the 1970/71 season beginning September 1 are likely to be moderately larger than in the current season. Production is estimated 6 percent larger, and a similar or slightly larger carryover than last year is in prospect. Prices of most major classes are expected to be about the same as or lower than a year ago after the new marketing season gets underway.

With lower anticipated yields, less dry pea production is expected this year despite a 5 percent larger acreage planted. Total supplies available for market will be somewhat less, as carryover is expected to be about the same as the previous season. Foreign demand will again be a major factor influencing domestic prices.

RECENT DEVELOPMENTS AND OUTLOOK

FRESH VEGETABLES

Winter and Spring Review

Fresh vegetable supplies from winter and spring crops were moderately below a year earlier as heavy rains and freezing weather in January in Florida cut supplies of many items. Demand held strong and prices averaged materially higher than a year earlier through June. An exception was lettuce, where supplies from California were liberal, and prices were generally lower. Record large imports of tomatoes from Mexico augmented sharply reduced Florida shipments.

Summer Vegetable Production

Slightly Larger

Total summer fresh vegetable supplies are expected to be about 2 percent more than a year earlier, and melon supplies up 4 percent. For most major crops, slight to moderate changes in production are expected. Early-summer onion production will be 12 percent less than 1969, but acreage of the late-summer crop is up. Summer supplies of cabbage and celery will be down moderately. Early-summer carrot production is sharply higher than the short 1969 crop and larger than average. There will be slightly to moderately larger supplies of sweet corn, snap beans, tomatoes, and lettuce.

With this supply situation, fresh vegetable prices are likely to average close to, or slightly higher than a year earlier.

Watermelon supplies from the summer crops are expected to be 5 percent larger than 1969. July shipments have been heavy.

Cantaloup production from the mid-summer producing States will be 6 percent larger this year. Early-summer cantaloups were in shorter supply this summer. Fewer honeydews are expected to be shipped.

Prospects for Major Fresh Vegetables

Cabbage--Cabbage supplies this summer are expected to be about the same as a year earlier with early-summer supplies a little larger and later areas expected to provide 3 percent less. Late-summer production has been slowly declining since the mid-1950's and in recent years production has been running about a fifth less than in the middle and late 1950's.

Summer harvest is active in New Jersey and the other early-summer States. Although California, North Carolina, and Pennsylvania shipped some quantities earlier, volume from the late-summer States is expected to be heavy by mid-August. Prices have been averaging much above a year earlier--a pattern likely to hold well into August.

In contrast to the late-summer crop, the early-fall cabbage acreage is 6 percent larger this year. Part of the production from this acreage is usually sold for kraut, and kraut packers are expected to be active buyers again this season. The long-term production trend for early-fall cabbage has been stable since the middle 1950's.

Carrots--Carrot supplies this summer will be much larger than the short 1969 crop. Until the end of August, California will be the dominant supplier. The late-summer crop from New Jersey is up a bit. Last year prices to growers remained high from July to the end of the year, and into January 1970. This season

mid-July prices at Salinas (Calif.) shipping points have been steady at \$3.00 for a 48 pound carton of 1 pound film packs. But this is \$2.00 less than a year earlier, and prices are expected to remain below the average of recent years. Quantities used for freezing probably will be the same or larger this year, as apparent disappearance of the frozen pack has been above the price of the previous 2 seasons.

Celery--Total supplies of celery are estimated to be a little smaller this summer, as the California early-summer production is 5 percent less than a year ago, and summer production in other states is 1 percent less than 1969. Early July shipments have been less this season, but prices have been lower than last year. However, California acreage currently grown is about an eighth above a year ago. Some of these plantings could be harvested later, should prices strengthen. Michigan shippers delayed their earlier marketings waiting for prices to improve. Early July shipping point prices generally were around \$2.25-\$2.50 crate for the 2-3 dozen size. Celery prices, as with most fresh vegetables, tend to fluctuate sharply from week to week reflecting the availability of supplies. For example, California celery in May was bringing \$6.50 per crate, f.o.b.

Sweet Corn--Sweet corn supplies this summer promise to be close to the 7.4 million hundredweight production of the previous 2 seasons. There are no unusual departures in any of the important producing states.

Sweet corn shipments to northern markets from Alabama, Florida, and other southern States ended as the New Jersey crop attained volume movement early in July. Supplies are now liberal. In the northern States prices will be at their seasonal low for the next 4 to 6 weeks. Rainfall has been adequate to plentiful to insure good yields in this section of the country.

Lettuce--Late spring and summer lettuce production at 12.4 million hundredweight is practically unchanged from the 2 previous seasons. New Jersey supplies were lighter this year but larger New York tonnage will more than offset the difference in local eastern markets. California shipments from the important Salinas-Watsonville area have been liberal with generally low prices prevailing.

While that State's shipments have tapered off some in recent weeks, the difference in consuming markets is being made up largely from local supplies. Mid-July shipping point prices were less than \$1.50 per crate, and low to moderate prices are expected to continue into the fall.

Onions--Spring onion production this year was somewhat larger than a year earlier, but prices for first half of this year were well above 1969, and the recent average. Unloads from both California and Texas so far in the new season beginning April 1 have exceeded the comparable 1969 period.

Early-summer onion production is 12 percent less than last year. Kern County California late-spring onion shipments continued past mid-July, while some onions from the Stockton area are beginning to show in the markets. The High Plains area of Texas began its early-summer harvest in volume by mid-July. Production there is expected to be off 14 percent from 1969. Early July volume from New Mexico was well under that of a year ago, as the early-season crop there is one-fifth less than 1969. Sweet Spanish harvest began there in mid-July. Texas and New Mexico together account for about three-fourths of the early-summer output. The remaining production comes from New Jersey and Washington.

Late-summer onion acreage is 3 percent more than a year ago. This important seasonal group usually accounts for roughly two-thirds the total U.S. production. Yields may not match 1968 or 1969, unless replanted fields do well. The August 7 production forecast gives the first indication. New York and the Idaho-Eastern Oregon area increased their 1970 acreage, accounting for the gain in the late summer group. Michigan, Colorado, and California showed little change in acreage this year. The New York crop is reported in good condition except in Orange County where substantial acreage was thinned by the wind, with some acreage replanted. Michigan's harvest started August 1. Development of the Idaho crop has been slower than usual as a result of cold spring weather. Also a larger than normal acreage of poor stands were replanted.

Tomatoes--Tomato shipments the first half of July were under a year earlier; prices were above average. However, early-summer

acreage and production are above 1969, and shipments are near their peak volume. Heavier production is expected in most major producing States--California, New Jersey, Alabama, and Arkansas. In Virginia sharply lower acreage is responsible for lower production. With August supplies expected to become more generous, prices will move toward the seasonal lows of August and early September.

South Carolina late-spring volume movement ended in mid-July; Arkansas and Alabama early-summer shipments were getting underway at that time. New Jersey volume is now heavy. In California, the San Joaquin and Salinas Valleys will be contributing substantial quantities to the market in August.

The late-summer tomato acreage is forecast moderately below 1969, and the smallest of recent record. Crop progress in the major producing states of Michigan, New York, and Pennsylvania tends to be a little earlier than usual.

Cantaloups--Domestic spring and early-summer cantaloup crops were much smaller than a year ago. Imports from Mexico, which helped make up some of the difference, were about an eighth larger than the year earlier record. Imports tapered off as domestic supplies increased in May. Before mid-May, Mexican cantaloups have no domestic competition.

The mid-summer cantaloup crop, the main seasonal group, is forecast 6 percent larger than a year earlier. California's Kern County and West Side districts have been shipping in volume beginning in late July. Prices have been 40-50 percent higher than a year ago, but with larger than year-earlier volume expected in August, prices likely will move closer to those of 1969.

Watermelons--Late-spring watermelon production has been estimated about a tenth less than a year earlier as acreage was cut back substantially. However, production in the summer States combined is up 5 percent from 1969. The pace of shipping picked up markedly when early-summer shipments began in mid-July. Texas, Georgia, Florida, South Carolina, and California all bunched heavy shipments at that time. As a consequence, prices, which had been much higher than a year ago up through early July, dropped to \$1.80-\$1.90 hundred-weight. This was only moderately higher than 1969. Melon prices eased off further late in July even though the Florida and Georgia

harvests were largely completed by that time. These supply sources have been replaced by later producing States which have lighter tonnage to move. Watermelons will be available in seasonally declining volume through August, with prices about the same as or a little less than 1969 levels. Hot weather demand in northern markets would be one determining factor.

PROCESSED VEGETABLES

Even though packs of most canned and frozen vegetables were reduced in 1969, supplies were still above average because of record large carryover. For the 1969/70 marketing season, disappearance of processed vegetables continued heavy, though not matching the record of a year earlier when stocks were even larger. Carryover of canned vegetables into the 1970/71 season will be substantially below the record volume a year earlier.

Excluding frozen potato products, the carryover of frozen vegetables is also down substantially this year. Fordhook lima beans and sweet corn are still in relatively heavy supply, but snap beans, broccoli, and spinach began new seasons with sharply reduced stocks; the carryover of peas was moderately less.

1970 Production Prospects Moderately Lower

Current reports suggest another reduced pack of processed vegetables again this year. Estimated acreage of 9 of the 10 principal processing vegetables is 7 percent less than last year, and 12 percent under the 1964-68 average. (See table 2.) Apparently, packers are again adjusting supplies downward to bring them more closely in line with anticipated trade requirements. Indications are that this objective can be largely met for most major items.

Growing conditions have been generally favorable and crops are making good progress, although some delay occurred from cool, wet weather early in the growing season. Rain has been adequate in most States and excessive in parts of north central sections. Some damage occurred in low-lying areas. Green pea production, canning and freezing combined, is forecast about a tenth less than a year earlier and a fifth less than 1968. Lower yields and 6 percent less acreage harvested this year are responsible. Production of snap beans for processing is currently forecast almost the same as

Table 2.--Vegetables for processing: Acreage and production, United States

Crop	Planted acreage			Production		
	Average 1964-68	1969	1970	Average 1964-68	1969	Indi- cated 1970
	-- 1,000 acres --			-- 1,000 tons --		
Snap beans	265	251	241	559	568	567
Green peas	473	441	410	553	524	471
Spinach (winter and spring)	22	18	21	122	109	122
Total with production 1/	760	710	672	1,234	1,202	1,161
Green lima beans	97	89	75	102	99	n.a.
Beets	18	19	16	205	220	n.a.
Cabbage for kraut-contract	9	11	12	167	186	n.a.
Sweet corn	467	465	432	1,928	2,109	n.a.
Cucumbers for pickles	141	140	137	510	503	n.a.
Tomatoes	310	272	249	5,180	4,898	n.a.
Total - 9 vegetables 1/	1,802	1,707	1,593	9,326	9,217	n.a.

1/ May not add to total due to rounding.

n.a. - not available.

Data from Vegetables-Processing, SRS, USDA, July 1970.

a year earlier; harvested acreage is down 4 percent. Plantings of other important vegetables range from moderately to substantially less than a year ago. As a result, further pack reductions are expected this season for tomatoes, sweet corn, lima beans, and beets. Production of cabbage for sauerkraut will probably be larger this season; more winter and spring spinach has been packed; but pickle production may not be greatly different since acreage planted is almost 2 percent less this year.

The 1970 pack of canned vegetables may be moderately smaller than in 1969. With smaller carryover stocks this year, total supplies available will be down significantly from the high level of the past 2 years. However, supplies are expected to be ample; prices will average above the depressed levels of the last 2 seasons.

The 1970 pack of frozen vegetables may total 5-10 percent below a year earlier, and

stocks are smaller. A reduced total supply and firm consumer demand likely will bring some strength to wholesale prices during 1970/71.

Cold storage holdings of frozen vegetables (excluding potatoes) on July 1 were 5 percent less than the record on hand a year ago, and slightly less than 2 years earlier. Snap beans, lima beans, and peas were in substantially lighter supply. There was a little more sweet corn than a year earlier, and significantly more broccoli and spinach as of that date.

Prospects for Leading Items

Lima Beans--Despite large quantities on hand, movement of canned lima beans has barely exceeded that of the previous season. This year canners and growers have planned for a 12 percent cut in acreage. The total supply of canned lima beans is likely to be materially less for the 1970/71 season, assuming little variation in

yield from last season's average of 1,900 pounds per acre. Frozen lima bean acreage has been cut back sharply this season. This is an attempt to bring supplies in better balance with an annual disappearance which has ranged between 140 and 150 million pounds in recent years.

The disappearance of frozen limas moved up very slowly during the 1960's, and the total has been relatively large in recent seasons. Although combined stocks of baby limas and Fordhooks are currently 10 percent under a year earlier, they are above the average of most recent years. Supplies of Fordhooks on July 1 were moderately above a year ago, and the acreage reduction is 34 percent for this variety. With prospective supplies in better balance with market needs this season, prices could advance.

Peas--Reduced production and a smaller carryover point to fewer peas this season. Indicated production is down about a tenth, reflecting smaller acreage and lower yields. Adding the carryover of old pack, total canned pea supplies are likely to be 10-12 percent less than a year ago. Prices are moving higher, but the rise will be tempered somewhat by the adequate supplies of other processed vegetables.

Present indications suggest that frozen pea supplies may also be as much as a tenth under the 1969/70 season. This would mean the smallest total supply since 1964/65.

Snap Beans--If snap bean yields run a little better than average, as presently forecast, the canned pack would be down only slightly this year with acreage expected for canning down 5 percent. With a smaller carryover in prospect, total supplies for the 1970/71 sales season would be smaller than the 2 previous seasons, but larger than other recent years. Smaller prospective supplies have led to recent price rises. With demand for canned beans growing, further price rises are likely during 1970/71.

The carryover of frozen green snap beans into the new pack season is expected to be at least a fifth under a year earlier. The 1969 pack was the smallest since 1965, and large carryover stocks were reduced in 1969/70. The 1970 pack probably will not be any larger than a year earlier, since moderately higher than average yields would be required. Total supplies of frozen green snap beans will likely be about a tenth less than the quantities available in the fall of 1969. With reduced supplies and firm demand, prices probably will move higher this season.

Canned Sweet Corn--Although shipments of canned corn have lagged behind the record movement of a year earlier, the carry-in to the new season will likely be moderately less than the abnormally large supply of August 1, 1969. But if the 1970 pack of canned sweet corn reflects the 3 percent preliminary acreage reduction, total supplies will again be more than ample for expected trade demand.

The price of whole kernel fancy has held steady since February, and extra standard is up about 7 cents a dozen from the same date. Although the prospective supply of sweet corn is ample, prices could rise further during the 1970/71 sales season, partly reflecting the better balance between total canned vegetables supplies and trade needs.

A sharp acreage cutback is forecast this season for frozen sweet corn. However, with a carryover slightly larger than a year earlier, the total supply available may be only about one-eighth below the previous season. Still, this would lend some strength to the potentially burdensome canned corn supply, as well as create trade interest in the frozen pack. Use of both canned and frozen sweet corn moved up sharply in the 1960's. Disappearance of canned sweet corn (marketing year basis) rose 44 percent between the 1960/61 and 1968/69 pack years, while frozen disappearance more than doubled.

Tomatoes--Total supplies of peeled tomato products for the 1969/70 season were probably much larger than average, although not as large as the 1968/69 record. Stocks of peeled tomatoes on July 1 were 38 percent less than the record of a year earlier, but still larger than most recent years. Total stocks of canned tomato juice on July 1 were down substantially from the large holdings a year earlier. And July canners stocks 7.6 million cased-303 basis) were lower than most recent years--lending strength to prices. The market for tomato products has been showing firmness and this is likely to continue. California 1970 raw product tonnage promises to be down at least as much as its 8 percent cut in acreage. This State now accounts for about two-thirds of the U.S. processed tomato tonnage.

Cucumbers for Pickles--A further reduction in pickle supplies is likely, for the carry-in of old stock is expected to be down sharply, and the tonnage available from the 1970 crop is likely to be slightly less than a year earlier.

Acreage for pickles is almost 2 percent less than a year earlier. Wisconsin is planning a sharp cutback, and smaller plantings have been made in several smaller volume States. More acreage is in prospect for Michigan, Ohio, and North Carolina.

Cabbage for Kraut--Sauerkraut supplies for the 1970/71 season probably will be moderately larger than the current season. Although carry-in will probably be about a tenth less, production may rise sharply because of materially larger contract acreage. Open market purchases of cabbage for kraut are made from primarily the early-fall cabbage crop. Last season open market purchases accounted for about a fifth of the total tonnage used for kraut.

Beets--With only a routine movement through trade channels the past 10 months, supplies of canned beets remain heavier than average. Still, the July 1 carryover probably was about one-sixth less than the record of the 1968/69 season. Growers and canners have planned further reductions this year, cutting acreage 16 percent. Production is expected to be close to 200,000 tons, moderately below 1969, and substantially under 1968.

Other Processed Vegetables--Stocks of frozen broccoli are somewhat less than the 60 million pound average June holdings of the past 4 seasons. The spring pack has been completed and packer prices are expected to remain firm at least until the fall months. Frozen spinach stocks, while one eighth larger than a year ago, are about average for other years.

POTATOES

Review of First Half of 1970

Table stock supplies this year through June were smaller than a year earlier. The stored 1969 crop, which dominated the January to May market, started out larger than a year earlier. But with heavy disappearance and substantial shrinkage, the balance tipped in the other direction by March 1. Production from winter, early and late spring, and early summer crops was lighter than the 2 previous seasons. However, stocks of frozen potato products were accumulating rapidly during this period. So, U.S. grower prices averaged only slightly to moderately above depressed levels of a year earlier.

The price pattern was mixed among the regions; Maine and Red River Valley prices were higher than early 1969, but growers in Idaho and other important Western States were receiving substantially less. The extended Idaho storage season also put pressure on new crop prices of the earliest shipments of California long whites. Long white prices ran fairly close to 1969 from May to mid-June even though production in the area was 3 percent less. But by late-June prices moved up in that region as well.

Summer Production Prospects Vary

Early-summer potato production is estimated a tenth less than a year ago, while the late-summer crop is slightly larger than a year earlier, but 2 percent under 1968. Prices early in the shipping period were substantially above 1969. Southeastern shipping point prices for round whites were \$4 hundredweight or better for much of May and June.

Late-summer crop prospects vary; larger than year-earlier shipments are expected from Washington and Colorado, about the same from Michigan, Wisconsin, and Minnesota, but less from New Jersey and Long Island. With a rather stable national supply situation, prices should hold somewhat above average through August. An exception might be in the 2 Western States previously mentioned, since production in these 2 States is forecast one eighth larger this year.

Fall Crop Acreage Up Moderately Again

Indicated potato acreage for fall harvest is up 3 percent this year, and 9 percent more than the 1964-69 average. Practically all the increase is coming from Washington, Oregon, and Idaho. The 8 Central States expect to harvest only slightly larger acreage, while the Eastern States plan 1 percent less acreage this year. Acreage in Maine is expected to be the same as a year ago.

The first forecast of fall production will be released September 11.

More Frozen Potato Products

Stocks of frozen french fries were built up substantially this past season, and on July 1 still were a tenth above 1969 levels. Although trade movement of frozen potato products has been increasing markedly in each recent year, stocks could become excessive if the Western crop turns out to be moderately larger than a year earlier.

Table 3.--Fall potatoes: Harvested acreage by States, United States

State and area	Average 1964-68	1969 1/	Indicated	1970 as percentage of 1969
			1970 2/	
<u>1,000 acres</u>				
Maine	151.8	156.0	156.0	100
New Hampshire	1.3	.9	.8	89
Vermont	1.7	1.3	1.2	92
Massachusetts	6.4	5.0	5.1	102
Rhode Island	5.7	5.2	5.5	106
Connecticut	6.4	5.4	5.3	98
New York-Long Island	28.5	26.2	24.7	94
-Upstate	37.7	35.5	35.0	99
Pennsylvania	38.2	35.5	35.0	99
8 Eastern	277.6	271.0	268.6	99
Ohio	12.1	11.0	11.9	108
Indiana	6.4	5.7	5.7	100
Michigan	33.2	28.7	29.1	101
Wisconsin	39.1	37.5	36.5	97
Minnesota	91.0	90.0	88.0	98
North Dakota	109.2	113.0	117.0	104
South Dakota	5.4	5.1	7.8	153
Nebraska	7.6	7.2	7.2	100
8 Central	304.1	298.2	303.2	102
Montana	8.0	7.5	7.7	103
Idaho	286.4	317.0	327.0	103
Wyoming	3.6	3.4	3.6	106
Colorado	33.3	37.0	37.0	100
Utah	7.9	7.4	6.0	81
Washington	34.3	51.0	64.0	125
Oregon	42.1	49.5	59.0	119
California	28.2	28.9	30.2	104
9 Western	443.7	501.7	534.5	107
Total fall	1,025.4	1,070.9	1,106.3	103

1/ Preliminary.

2/ Indicated acreage as of July 1.

Data from Crop Production, SRS, USDA, July 1970.

Table 4.--Sweetpotatoes: Production by States, United States

State and area	Average 1964-68	1969	Indicated 1970	1970 as percentage of 1969
	----- 1,000 cwt. -----			<u>Percent</u>
New Jersey	704	314	219	70
Maryland	440	378	294	78
Virginia	1,725	1,519	1,047	69
Central Atlantic	<u>2,869</u>	<u>2,211</u>	<u>1,560</u>	<u>71</u>
North Carolina	2,182	3,780	2,860	76
South Carolina	253	212	95	45
Georgia	748	640	624	98
Lower Atlantic	<u>3,183</u>	<u>4,632</u>	<u>3,579</u>	<u>77</u>
Tennessee	363	273	247	90
Alabama	464	484	450	93
Mississippi	1,002	850	800	94
Arkansas	151	142	143	101
Louisiana	4,014	4,420	4,675	106
Texas	844	780	910	117
Central	<u>6,838</u>	<u>6,949</u>	<u>7,225</u>	<u>104</u>
California	786	872	741	85
United States	13,676	14,664	13,105	89

1/ Indicated as of July 1.

Data from Crop Production, SRS, USDA, July 1970.

SWEETPOTATOES

Review of 1969/70 Season

The 1969 U.S. sweetpotato crop was 7 percent larger than the 1964-68 average, primarily the result of a higher yield.

Sweetpotato shipments lagged during the usually active late-fall period. Despite a larger crop, trade movement through fresh market channels by the end of 1969 was under that of a year earlier. Prices at all major shipping points (except Puerto Rico types from California) were markedly less than either 1967 or 1968. Reported fresh market movement for the season was 4 percent less than the previous season.

In contrast to the sluggish movement into fresh markets, processors used a record quantity for canning. Of the 1969 crop, nearly a fourth of the total production was canned. The 1969 pack amounted to slightly more than 300 million pounds, up nearly a sixth from a year earlier. Nearly 13 million pounds of sweetpotatoes were frozen. This too, was a record.

A Substantially Smaller 1970 Crop Indicated

After rather sluggish movement of fresh market sweet potatoes last year, producers reduced 1970 acreage by 2 percent. Indicated yields are down, and an 11 percent smaller crop is forecast. Sharply reduced output is expected from all the Atlantic States and California; only Louisiana, Texas, and Arkansas expect increases. In Louisiana production prospects are up 6 percent, this State probably accounting for 35 percent of U.S. production.

Market Prospects for 1970

Prices are expected to drop seasonally as harvest volume of the new crop gains momentum. But prices this fall are likely to average somewhat above those of a year earlier. Quantities processed may not reach 1969/70 record levels.

DRY EDIBLE BEANS

Review of 1969/70 season

Dry bean production in 1969 was 8 percent above the preceding year and 5 percent

more than the 1963-67 average. With carry-over stocks somewhat above a year earlier, the total supply for the 1969/70 season was little more than 8 percent above a year earlier. Extensive government purchases and strong export demand raised total use above most recent years. As of May 1, export volume was 38 percent more than the previous season.

With white bean supplies relatively heavy, grower prices for all white classes averaged the lowest in several years, but some strength was evident by late spring. Colored bean prices were under less pressure all season, as supplies were lighter, especially for pintos and blackeyes. The June average price of \$8.86 was above that of a year earlier.

Government Program Activity

Through July 20, the USDA Section 32 purchase of 1969 crop beans totaled 789,000 hundredweight. These were for school lunch and welfare programs. This compares with 872,000 hundredweight purchased from the 1968 crop (season ended August 31, 1969.)

Almost 2 million hundredweight were put under the price support program with about half the activity in Michigan, where pea beans were in heavy supply. By May 31, 1.4 million hundredweight had been redeemed.

1970/71 Prospects

Production estimates for the 1970 crop by class will not be available until December. Current indications suggest a bean supply larger than a year ago. Production of all dry beans is estimated 6 percent above 1969. This year's planted acreage is about the same, but bigger yields are expected. Little change in carryover is likely. With heavier prospective supplies, prices for pea beans are expected to average below a year earlier and be close to support levels. Colored bean prices will probably also average somewhat less too, but likely will remain above levels of many recent years.

In Michigan, where most of the pea beans and substantial red kidneys are grown, growers reduced planted acreage by 5 percent. With much higher yields in prospect, Michigan tonnage, which accounts for more than 40 percent of the U.S. total, is forecast 6 percent more. A 10 percent larger crop is forecast in New York where red kidneys and black

Table 5.--Dry edible beans: Production by areas, United States 1/

Year	Michigan	New York	Northwest 2/	Southwest 3/	California	U.S. total
<u>Million cwt.</u>						
1964-68 av.	6.7	1.1	4.5	2.0	3.0	17.3
1960	6.2	1.2	4.9	1.9	3.1	17.4
1961	7.4	1.3	5.0	2.6	3.4	19.7
1962	7.4	1.2	4.2	1.9	3.2	17.9
1963	8.6	1.0	4.7	2.4	3.3	20.0
1964	7.6	1.2	4.1	1.7	2.8	17.4
1965	6.2	.8	4.5	2.0	2.9	16.5
1966	8.0	1.3	5.3	2.1	3.2	20.0
1967	5.3	1.1	4.0	2.1	2.6	15.2
1968	6.3	.9	4.6	2.3	3.3	17.4
1969 4/	8.1	.9	4.7	2.2	2.9	18.8
1970 5/	8.6	1.0	5.0	2.5	2.7	19.8
:						

1/ Cleaned basis. 2/ Nebraska, Montana, Idaho, Wyoming, Washington, and Minnesota, and North Dakota beginning 1964. 3/ Kansas, Colorado, New Mexico, and Utah. 4/ Preliminary. 5/ Indicated.

Data from Crop Production, SRS, USDA, annual and monthly reports.

turtle soup beans predominate. In Nebraska, growing conditions were reported favorable, but total production is expected about the same as 1969. Great northern beans are most important; some pintos also are grown too. Idaho expects to harvest the same tonnage as a year ago, but Colorado expects about a tenth more. California acreage of both kinds of limas, and other classes as well, has been cut. Total production there is expected to be 8 percent less.

1970 Crop Price Supports

The 1970 support prices for dry beans are unchanged from those in effect the previous crop year. Producer support prices will average \$6.40 per hundredweight. Applicable loan rates for U.S. No. 1 grades and U.S. Prime Handpicked Pea Beans are as follows:

	<u>Per cwt.</u>
Pea and medium white	\$6.15-6.65
Great northern	6.71-7.21
Small white and flat	7.52
Pinto	5.97-6.57
Red kidney	8.51-8.70
Pink	7.32
Small red	7.37-7.47
Large lima	10.39
Baby lima	5.59

These published loan rates include all charges except receiving and loading out. Price-support loans mature May 31, 1971. The deductions from loan rates for farm-stored thresher-run beans will continue at \$2 per hundredweight in New York; \$1.50 per hundredweight in Michigan for all classes except pea beans, which will be \$1 per hundredweight; and \$1 per hundredweight for all classes in other States. These deduction cover cleaning and bagging costs.

DRY FIELD PEAS1969/70 Review

Production of dry field peas in 1969 was 4.8 million hundredweight, up sharply from the previous year. As a result, total supplies were much above 1968/69, but export movement was strong--up 24 percent from a year earlier. Grower prices held close to usual levels of about \$4.50 per hundredweight the first 6 months of this year. This was in decided contrast with 1968/69 when prices ranged as high as \$6.46, encouraging production of the larger 1969 crop.

Current Situation

1970/71 season will probably be about the same as a year earlier. With a crop forecast of 4.5 hundredweight, total supplies will probably be somewhat less this season. A 5 percent larger acreage was planted this year in Washington and Idaho, which accounts for more than nine-tenths U.S. production, but indicated yields are moderately lower in these States. Export demand will again exert a major influence on prices for the season, since domestic use holds fairly steady from year to year and accounts for a secondary share of the market.

THE VEGETABLE INDUSTRY - A REVIEW OF PROGRESS AND PROSPECTS

by

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ABSTRACT: The total tonnage of vegetables required by 1980 is projected slightly more than a sixth above 1969, barely exceeding population growth. Processing vegetable use will move up moderately, largely at the expense of fresh. Marketing functions will become even more tightly organized involving still fewer but larger organizations than those operating today. This includes the operations of grower organizations, processors, service wholesalers in fresh produce, retail markets, and institutional food services.

KEY WORDS: Fresh vegetables, processed vegetables, projections to 1980, fresh vegetable imports, processors, wholesalers, retail food outlets.

Rapid change has marked the vegetable industry the past decade and further changes are in prospect. Population growth, rising incomes, new food styles, more casual and informal living have all affected the demand for, and the ways of using vegetables.

Vegetables continue to find a large measure of favor from consumers. Per capita use of all vegetables gained moderately during the past decade. Output of domestic vegetables, excluding melons, has moved up 19 percent from the 1957-59 average, more than matching the population rise. Imports, especially of fresh tomatoes, processed tomato products, cucumbers and some melons, have accounted for an increasing portion of vegetable supplies.

Although vegetable use per capita has moved up some, the choice in vegetables has changed markedly, with salad vegetables showing substantial gains. Notable changes also have occurred in the form of the vegetables consumers choose. Over the years there has been a shift toward more processed products. In 1964, for the first time, per capita use of processed vegetables equaled that of fresh--about 100 pounds each, fresh equivalent basis. By 1969,

about 54 percent of the total consumption was either in the canned or frozen form. The shift toward processed vegetables traces to the late 1930's and early 1940's, and it seems likely to continue. However, with the bulk of many important items already being processed, the pace of the shift to processing likely will be slowed.

Convenience and Prices Favor Processed Use

The convenience of using processed products, plus their ability to compete on terms of quality and price has stimulated increases for the processing sector. Furthermore, the importance of the convenience factor is related to income changes. Demand for more services grows along with rising incomes, and grows more rapidly than that for basic food products. According to U.S. food consumption surveys, consumption of processed fruits and vegetables is more responsive to income changes than that for fresh uses. Elasticities for processed products are highest for frozen forms. The increased employment of women outside the home has also helped expand the demand for

processed foods. The quick preparation feature of many processed items frees time for activities other than meal preparation.

The more rapid increase in retail price of fresh vegetables is another reason for the increased popularity of processed vegetables. From 1957-59 the retail price for fresh fruits and vegetables increased 44 percent, while processed fruit and vegetable prices rose only 17 percent. (Retail price indexes for vegetables alone are not available, but indications are that the increase in prices for fresh was much larger than for processed.) Much of this difference comes from changes in unit marketing and handling costs. The fresh market industry has not mechanized and streamlined its harvesting, handling, and marketing operations as much as the processing sector.

Besides the convenience and price factor, changing tastes and eating habits must also be taken into account. For example, changing eating habits have had a profound affect on the processing tomato industry. Since 1960, per capita consumption of processed tomatoes went up 18 percent, or an average of 2 percent annually. On a per capita fresh-equivalent basis 50 pounds of tomatoes are used in processed form annually. This quantity of processed tomato products represents more than half the total canned vegetable usage and makes up nearly one-fourth of all vegetable consumption. A principal reason behind these changes is the burgeoning fast-food business featuring catsup-seasoned hamburger and french fries. Add to

Table 6.-- Retail price indexes for fresh and processed fruits and vegetables, 1962-64 average and 1965 to date 1/

(1957-59-100)		
Year	Fresh	Canned and frozen
1962-64 average	112.7	107.2
1965	121.7	107.3
1966	123.9	109.9
1967	124.3	109.2
1968	136.0	115.3
1969	138.1	116.3
1970-1st quarter	144.0	117.2

1/ Food consumed at home.
Bureau of Labor Statistics.

this the rapidly expanding pizza market, and it is easy to see how these taste changes--largely in the younger population--have made tomato products the volume gainer of the 1960's.

Trends in Fresh Use Shift

While the increased popularity of processed vegetables has been largely at the expense of fresh market items, certain fresh vegetables, mostly "salad" items, are enjoying growing popularity. In the last decade, per capita use of lettuce, cucumbers, and peppers rose substantially. But use declined for some vegetables commonly used in the raw form, including cabbage, carrots, and celery.

Table 7.-- Trends in consumption per capita for selected fresh vegetables

Year	Lettuce 1/	Tomatoes	Onions 2/	Cabbage	Carrots	Cucumbers	Peppers	Celery	8 item total	Total all fresh vegetables
Pounds										
1947-49										
18.6										
1957-59	20.3	12.4	11.7	10.6	7.3	2.8	2.2	8.0	75.3	104.1
1960	20.0	12.6	12.3	10.4	7.0	2.9	2.4	8.0	75.9	105.8
1965	21.6	12.1	11.4	9.0	7.0	3.1	2.3	6.7	73.2	98.4
1968	22.2	12.0	12.1	9.2	7.2	3.0	2.7	7.0	75.4	97.8

1/ Includes escarole. 2/ Includes 0.1 pound of shallots each year through 1958; since 1958 less than 0.05 pound.

For many fresh items which are also processed, the fresh form has declined and further drops in per capita use are expected. First, it was peas and lima beans, followed by snap beans. Most recently it has been some of the cole crops--broccoli, brussels sprouts, and cauliflower. Even sweet corn, a perennial favorite especially with the young, now falls into this category. Per capita use of corn in the fresh form has begun to show a modest decline. Spinach and other leafy greens have fared similarly. Further declines in per capita use of fresh spinach, greens, snap beans, and sweet corn are expected. There has been a sharp reduction in cabbage since 1950, but this rate of decline is likely to lessen. While use of fresh carrots has not changed much in the past decade, after trending down during the 1950's. Use in the fresh form probably will decline a little more, as fewer fresh carrots are likely to be purchased for home cooking during the 1970's.

Further Increases Expected
for Processed Vegetables

Increased use of both canned and frozen vegetables is expected in the 1970's. With the percentage of women employed likely to show some further increase 1/, there will be a continuing trend toward processed convenience foods. The prospect of smaller household units would also tend to favor increased use of commercially prepared foods, since many would find any added costs for convenience largely offset by reduced waste and less chance for unused leftovers.

In many cases more of these processed products are likely to appear as parts of a meal package, rather than the standard consumer-sized product unit. A larger share of the processed vegetable pack is likely to be packed initially in larger institutional sizes, with some re-packed later into a wider variety of food specialities. Also the institutional market is expected to grow more rapidly than the consumer package trade, as the trend toward more meals away from home continues. The needs of those eating places will also favor the expanded use of vegetables in processed form since processed forms of the same vegetables require substantially less preparation time. Processed vegetables also are more easily handled where labor is limited or inexperienced.

New processing techniques like freeze-drying and foam-mat drying may supplement, but will not replace conventional canning and freezing processes.

Table 8.-- Trends in per capita consumption of vegetables, fresh, canned, and frozen averages for 1947-49, and 1957-59, and projections to 1980 1/

Period	(Fresh weight basis)			
	: Fresh :		: Frozen :	
	: 2/ : Canned :		3/ : Total	
: Pounds				
1947-49 average	121	72	7	200
1957-59 average	104	81	15	200
1960	106	82	15	203
1965	98	85	18	201
1969	98	94	20	212
1980 projected	90	96	26	212

1/ Demand projections for fresh, canned, and frozen vegetables were developed by C.R. Brader, formerly associated with the Vegetable Section, ERS-ESAD.

2/ Excludes melons. 3/ Excludes frozen french fries and frozen potato products.

Table 9.-- Use of vegetables, fresh, canned, and frozen, 1947-49 and 1957-59 with averages and projections for 1980 1/

	(Fresh weight basis)			
	Civilian disappearance			
	: Fresh :		: Frozen :	
	: 2/ :		: 3/ :	
: Million pounds				
1947-49 average	17,489	10,521	963	28,973
1957-59 average	17,847	13,908	2,493	34,248
1960	18,863	14,549	2,658	36,070
1965	18,880	16,326	3,336	38,542
1969	19,552	18,887	3,890	42,329
1980 projected	20,898	22,404	5,965	49,267

1/ Projections for fresh, canned, and frozen vegetables were developed by C. R. Brader, formerly associated with the Vegetable Section, ERS-ESAD.

2/ Excludes melons. 3/ Excludes frozen french fries and frozen potato products.

1/ U.S. Department of Labor; Manpower Report of the President-1970, p. 296.

By 1980, total use of all vegetables is expected to be up more than one sixth, a little more than the indicated population growth. Fresh vegetable tonnage likely will be up only moderately--perhaps 6 to 8 percent; this would mean some further decline in per capita use. Total raw product needs for processing may total around 284 million hundredweights--up about a fifth--with canned up perhaps a fifth and frozen up as much as 50 percent.

Supply Changes

Total production of fresh market vegetables has moved up a tenth from the 1957-59 average. California, the leader, and Oregon are the only States to record substantial gains in this span. The Western States now produce half of the Nation's fresh market vegetables. Florida, the second-ranking most important fresh vegetable source, did a little better than hold its own. Texas and Arizona, in third and fourth place, have experienced moderate production declines. In the East, output has dropped sharply in New York and moderately in New Jersey. Michigan, the Midwest's major vegetable producer, has maintained production. Though producing less volume than the other states mentioned, New Mexico has doubled its fresh vegetable output.

Processed Vegetable Output Up

Processing vegetable production has moved up nearly a third from the 1957-59 average. Most of the increase has come from the Pacific Coast States, but some additional sweet corn and cucumber pickles have been produced in North Central area.

In 1969 tomatoes accounted for slightly more than half the total vegetable processing tonnage. Sweet corn was second, followed by snap beans, peas, and pickling cucumbers. These 5 items comprised about 90 percent of the raw product used in vegetable processing in 1969. In terms of value, these leading crops cover a lesser share, since many of the low volume items--such as asparagus and lima beans--are high value items. Production of all leading vegetables for processing increased during the decade. The largest tonnage gain came in tomatoes as average production moved up more than 50 percent--about 2 million tons. (Average 1967-69 vs. average 1957-59.)

Both freezing and canning made substantial gains; tonnage of vegetables used for

canning rose 33 percent, while frozen, excluding potato products, rose 59 percent. Starting from a lower base, frozen vegetables made more spectacular percentage gains than canned. Even so, several important canned vegetables posted large gains. The pack of canned snap beans grew nearly 61 percent, and canned corn 40 percent. Peas actually declined about 4 percent. Noting the changes in frozen packs, sweet corn production tripled from the 1957-59 average. Frozen snap beans and peas both gained about 42 percent.

With a modest growth in fresh market vegetables and continued growth in processed, total vegetable production is expected to expand gradually during the 1970's--with output in 1980 up perhaps a sixth from 1969.

Imports Become More Important

The labor intensive character of the vegetable industry has stimulated growth in imports, especially from Mexico. Such imports will probably play an increasingly important role in the winter produce industry.^{2/} There is a good prospect of increased U.S. demand for winter tomatoes. With a combination of more favorable weather coupled with adequate production resources, and a substantial low-cost labor supply, Mexico will continue to provide keen competition for south Florida, particularly in western markets. However, gains have been made in development of a mechanical harvester for fresh market tomatoes, and this could help Florida meet competition from Mexico.

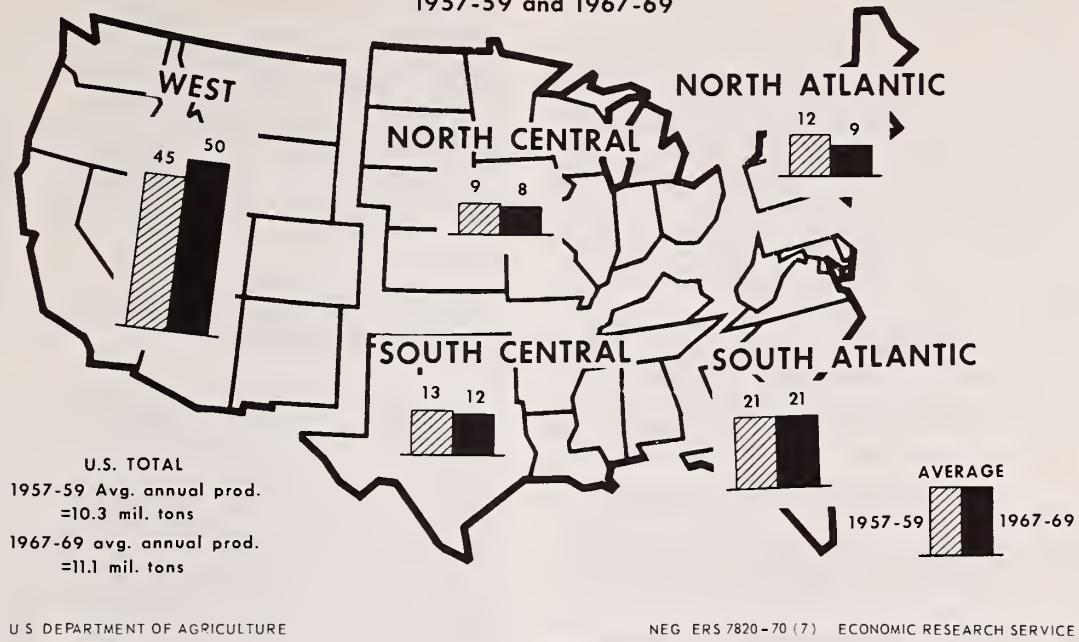
Imports of peppers and eggplant from Mexico also are likely to increase further if that nation can strengthen its hold on West Coast markets. In the near term, at least, Florida probably will retain its competitive position for these commodities in eastern and central markets. Mexico has no domestic competition as a supplier of winter and early spring cantaloups to U.S. markets.

In recent years imports have made up about 4 percent of total fresh market vegetable supplies. Exports of fresh vegetables mostly to Canada have taken about 3 percent of domestic production with this situation not likely to change greatly in the 1970's. In the processed vegetable sector, there have been some tomato

^{2/} "Supplying U.S. Markets with Winter Produce," pp. 52-53, A.E.R. No. 154, ERS-USDA.

PRODUCTION OF VEGETABLES FOR FRESH MARKET

Each Region as Percent of U.S. Total
1957-59 and 1967-69

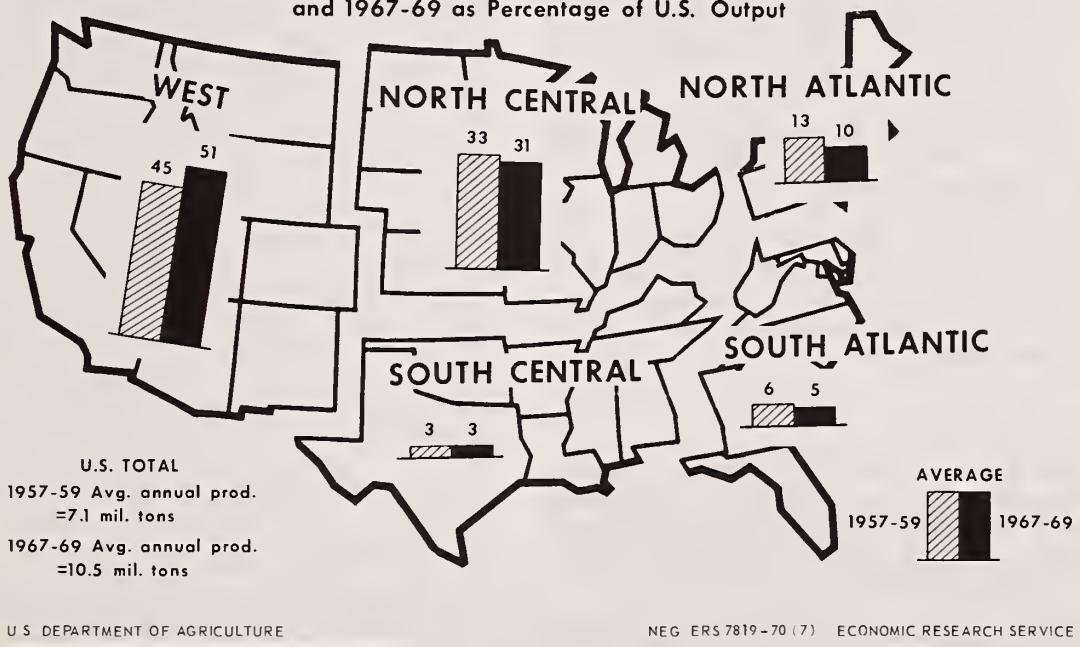


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VEGETABLES FOR PROCESSING

Regional Production Averages for 1957-59
and 1967-69 as Percentage of U.S. Output



U.S. DEPARTMENT OF AGRICULTURE

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product imports from Mediterranean countries, but otherwise processed vegetable import have not been substantial.

How much competition the American vegetable industry meets from abroad is closely related to rising domestic labor costs. Fresh vegetable imports, especially in the winter and early-spring seasons, have increased markedly in recent years. In the absence of import restrictions, this trend is likely to continue, because labor costs in the domestic industry are likely to rise fairly rapidly. However, substantial progress has been made in the efficiency of domestic vegetable production. More will come. Processed vegetable production in the United States is now practically completely mechanized as all the major vegetables are now machine harvested. For other vegetable crops, the industry is striving to reduce its dependence on harvest labor, and is constantly evaluating the cost of developing new labor-saving technology against the probable future cost of labor.^{3/}

To illustrate, other agricultural enterprises have been making even greater gains in labor productivity than vegetables. In 1968 about 13 percent more vegetables were produced using 7 percent fewer man-hours of labor compared with the 1957-59 average. In the same period, total U.S. farm output rose 19 percent using about 30 percent fewer man-hours of labor.^{4/} Also, production per man-hour in American agriculture gained 82 percent; in the vegetable industry, 19 percent.^{5/}

Although rising labor costs and foreign competition pose difficult problems for the domestic vegetable industry in the near future, one can assume that many growers will still be able to compete effectively as they work to make the most of their market opportunities. The balance of this article considers growers' opportunities and the changed character of these market outlets.

3/ Mamer, John W.; "Manpower Policies and Programs," pp. 341-356, *Fruit and Vegetable Harvest Mechanization*, Cargill and Rossmiller, Editors, *Rural Manpower Center Report No. 17*, Michigan State University.

4/ 1969 Agricultural Statistics, Table 683, pp. 455 and 478.

5/ *Ibid.*, Table 661, p. 457.

Developments in Fresh Market Wholesaling

Many growers who have enlarged their operations are able to sell direct to supermarket buyers or to maintain contacts with terminal market wholesalers and other distributors. And many of these wholesalers have developed important institutional customers. But the past 30 years have seen the buyer going to the country more often. First it was the large chain buyer who arranged for direct delivery from shipping point to the chain warehouse. Now, other food retailers, regional chains, as well as voluntary and cooperative groups are following suit, though not to the same extent.

Direct buying from shipping point sources has grown in recent years and is bound to become even more important. According to a 1964 study, this form of buying accounted for about a fourth of fresh vegetable sales; however, the largest corporate chains secured as much as 70 percent of their produce needs using direct purchasing.^{6/} No precise data exist on the percentage of produce moving directly to retailers, completely bypassing the terminal market or food distribution centers, but all estimates still point to something less than half.

About the only numerical data available is that from *Federal-State Market News*. In each of the last 3 years the Market News Service estimated that roughly a third of the reported produce unloads moved direct to retail store warehouses (national chains, regional chains, voluntary groups, cooperative retail organizations.) This same source noted that for some major cities direct movement does exceed 50 percent, but the national average is about a third. There is, however, an upper limit to quantities of produce moving directly to retail warehouses. This limit comes from the need to supply the growing institutional trade in metropolitan areas. The needs of such outlets as plant cafeterias, schools, most franchised quick-service restaurants, hospitals, and hotels are best met by service wholesalers. Furthermore, chains do not find it practical to purchase all their needs direct from shipping point sources. Also some chains do not maintain sufficient warehouse space to buy all produce on a direct basis.

Gradually the wholesale produce industry has come to think more of offering a variety

6/ *The Structure of Wholesale Produce Markets*, pp. 71-72, E.R.S., USDA, April 1964.

of merchandising services to their customers. This changed thinking is largely responsible for the rise of specialists in the business; some of these handle a limited number of commodities, others do consumer packaging, others service only certain kinds of customers. The traditional function of wholesale distribution, that is the disposition of large lots broken down to smaller units, now is only one part of their terminal market food distribution center operation.

For the future, the fresh vegetable marketing operation is going to become even more specialized.^{7/} There will be increasing emphasis on the ability to put together uniform lots to meet the specifications of each kind of customer. The packer or shipper whose volume is small or of variable quality will find it increasingly difficult to market profitably. Shippers will tend to become identified with a relatively smaller number of buyers, and vice versa. Even though this may simplify the problem of finding a market, it will tend to divide the market into submarkets, some of which are not closely related.

With more direct movement and the possibility of tighter quality controls, sales of branded fresh vegetables are now receiving renewed attention. Following the example of prominent fruit suppliers, vegetable men are considering adopting similar techniques. To do so would require more capital and more facilities than most individual growers can acquire. Therefore, firms not associated with the vegetable industry in the past are considering applying their marketing expertise to an industry where sales on a brand basis hardly exists. Some have begun by buying into larger grower operations. This market development is expected to continue throughout the 1970's. A companion move is the growing employment of vegetable farm managers who are employed in integrated production and marketing enterprises; this development is associated with the trend toward larger capital requirement in the industry. More of these integrated arrangements are expected the next few years.

Direct-to-Consumer Retailing

Some vegetable growers have developed direct-to-consumer retail sales operations. They have done this instead of enlarging their

production facilities, or perhaps they were not in a position to consider joining others in a marketing cooperative venture. While this direct retailing does not account for a large share of produce marketing in the United States, it does assume some significance in certain areas. Wherever fruit and vegetables can be grown fairly close to a moderately-sized trading area, this method of selling can still become an attractive alternative for the "merchandising minded" producer. Direct retailing is finding new interest in the Northeast and Great Lakes areas of the country. There are no comprehensive data to measure this activity. But even in States where these enterprises are concentrated, this selling method probably accounts for a relatively small part of total fresh produce sales.

Grower Sales To Processors

Processors provide an assured outlet for vegetables grown for processing and occasionally include some items grown originally for fresh market. Like fresh market wholesaling, fewer but larger grower and processor operations are involved today. In this industry, which has become so highly mechanized, the most efficient use of expensive harvest equipment is mandatory. This, plus other continually expanding capital needs increases the mutual dependence of processors and growers. Processors will need more raw products but will be finding fewer growers who can provide adequate volume. The need for closer cooperation between grower and processor can be expected to bring on more industrywide pricing of raw products than has been the case thus far.

Since fewer growers are likely to be involved, pricing methods for raw products are likely to become more sophisticated. Growers could form their own bargaining cooperative, buy into the processing venture, or use the existing market order structure more widely. Even though grower organizations may strengthen, it is still an open question whether they can improve their bargaining position relative to processors and retail marketers. Many observers consider that most growers will continue to be residual claimants in the pricing process. 8/

^{7/} Op. cit., p. 119.

^{8/} Report of the U.S. Food Marketing Commission, Food From Farmer to Consumer, p. 54, June 1966.

No single approach is likely to be applied universally, and chances for success seem best where specialized items are produced in concentrated areas by relatively few producers. Furthermore, terms of trade and buying specifications will become more important in relation to the raw product price received by growers. Competition from foreign supplies and potentially lower costs of competing synthesized foods, along with new developments in food technology would tend to temper any upward move in farm and retail prices for processing vegetables.

The Effect of Fewer Vegetable Processors

Even though many producers feel economically disadvantaged when bargaining with canners and freezers, many processors in recent years have been caught in a cost-profit squeeze. It appears that profits in the fruit and vegetable processing have been rather low, relative to other industrial sectors. 9/ Despite the growing popularity of processed fruits and vegetables, few new firms have been attracted to this industry. In fact, the number of vegetable processors has declined rather dramatically in recent years, as smaller seasonal operators have found it difficult to continue to compete. Economies of scale in vegetable processing have become increasingly important and surviving firms have expanded to supply the growing market. Most of the survivors are diversifying their product lines in an effort to meet new trends in consumer demand while keeping unit operating costs as low as possible.

Further concentration of the vegetable processing industry is likely. However, marketings of nationally advertised brands of processed vegetables are expected to expand less rapidly than the total market. More and more packers of unadvertised and private labels will be found among the largest firms, even

though the leading firms in canning and freezing will remain the focal point of price determination both for raw and finished products. 10/

Fast-Growing Retail Food Outlets

No comprehensive review of food retailing will be attempted here. Instead, developments which relate to prospects in the vegetable industry will be discussed briefly. First, a different mix of retail food outlets has been emerging the past few years. Franchised fast-service food outlets have made conspicuous growth in the past 5 years. Their sales, based on rough industry estimates, are running close to \$5 billion a year, and growing at an annual rate of 20 percent. While this still represents a fraction of U.S. total retail food expenditures of about \$110 billion, the growth potential seems to be attracting the interest of food retailers, both chain and independent.

Many supermarkets are already selling some fully prepared fast-food items, though there are as yet few completely separate departments. At present, these foods are sold in the delicatessen department or through some other arrangement. Many retailers feel that the supermarkets of the 1970's will be designed to handle fast-food sales from inside or outside the store--before, during, and after normal store hours. As for implications to the vegetable industry, any further growth in fast-food sales will probably tend to favor increased use of processed tomato products, potatoes and possibly certain salad vegetables.

Another development has been the increasing importance of convenience stores. In 1969 they accounted for nearly 3 percent of total grocery store sales. 11/ These organizations are generally serviced by outside wholesalers, rather than through their own warehouses. Their supply sources are therefore relatively flexible, and may provide new market opportunities for direct service by growers or

9/ National Commission of Food Marketing, Organization and Competition in the Fruit and Vegetable Industry, Technical Study No. 4, p. 213 and 249, June 1966.

10/ Report of the National Commission on Food Marketing, Food From Farmer to Consumer, p. 54, June 1966.

11/ Thirty-seventh Annual Report of the Grocery Industry, Progressive Grocer, p. 83, 1970.

service wholesalers in certain areas. Operators of these markets tend to view the future optimistically as they note that customers appreciate quick shopping and fast checkout. As income levels rise, many people feel they can afford the cost of this convenience. Supermarkets, by comparison, are growing even larger.

The recent emphasis on "discount" supermarket merchandising is not exerting any appreciable influence on the vegetable industry, since produce departments are not typically involved. While techniques in pricing strategy may vary, the most widely discounted items are the health and beauty aids, followed by dry groceries, with meats, fresh fruits and vegetables affected the least. However, one reason

for the larger sales gains in 1969 by chains versus independents was attributed to centrally administered control inherent in chain operation. This centralization allows them to put "discount" program into effect more rapidly than their independent competition.

While some of these more recent developments in food retailing have attracted considerable attention, the trend to fewer but larger stores continues as there were 219,000 grocery stores operating in 1969, 41,000 fewer than 1960. ^{12/} Average annual sales per store nearly doubled in the same time period.

12/ Ibid., p. 53.

Table 10.--Vegetables, fresh: Representative prices for stock of generally good quality and condition (U.S. No. 1 when available), New York, Chicago, and shipping point, indicated periods, 1969 and 1970

Market and commodity	State of origin	Unit	Tuesday nearest mid-month					
			1969			1970		
			May 13	June 17	July 15	May 12	June 16	July 14
			<u>Dollars</u>					
<u>New York:</u>								
Beans, snap, green	New Jersey	Bu. basket	---	6.00	6.25	---	5.00	2.75
Broccoli	California	14-bchs., crates	4.50	3.75	5.00	5.25	4.50	4.00
Cabbage								
Domestic, round type	New Jersey	Various used crates	---	1.75	1.12 $\frac{1}{2}$	---	3.65	2.25
Cantaloups	California	36's jumbo crt.	---	9.25	7.50	---	11.00	11.00
Carrots, topped, washed	California	48-1 lb. film bag crt.	4.75	5.00	6.75	4.25	4.15	4.40
Cauliflower	California	Carton 12's	---	---	5.25	5.50	4.50	5.25
Celery								
Pascal	New York	2-3 doz., crt.	---	---	6.50	---	---	3.25
Pascal	California	2-3 doz., crt.	8.00	9.00	9.75	10.75	5.50	4.25
Lettuce, Iceberg	California	2 doz., ctn.	5.50	3.25	3.75	3.40	3.75	3.50
Spinach, Savoy	New Jersey	Bu. basket	1.00	1.00	1.75	---	1.12 $\frac{1}{2}$	1.35
Tomatoes	Ohio	8 lb. bskt., med.	3.75	3.00	---	---	3.25	---
<u>Chicago:</u>								
Broccoli	California	14's, $\frac{1}{2}$ crt.	4.25	4.40	4.25	4.50	4.35	3.75
Cabbage								
Domestic, round type	Illinois	Various used crates	---	---	1.75	---	---	3.15
Cantaloups	California	36's jumbo crt.	---	8.25	7.25	---	11.00	8.75
Carrots, topped, washed	California	48-1 lb. film bag	4.75	5.00	6.25	4.00	3.75	4.65
Cauliflower	California	Film wrpd., ctns. 12's	6.50	---	4.75	4.75	3.75	4.25
Celery								
Pascal	California	2-3 doz., 16 in. crt.	7.25	8.00	7.75	9.50	4.85	4.25
Pascal	Michigan	2-4 doz., 16 in. crt.	---	---	6.65	---	---	3.50
Cucumbers	Illinois	Bu. basket	---	---	4.25	---	4.25	4.25
Honeydews	California	2/3-flat crt. 5-8's	---	---	2.35	---	---	3.25
Lettuce, Iceberg	California	2 doz. heads, ctn.	5.00	2.75	3.00	3.25	3.15	3.00
Spinach, flat type	Illinois	Bu. basket	3.25	3.75	4.50	---	4.00	4.25
Tomatoes	Illinois	10-lb.bskt., med.-lge.	---	---	2.00	---	---	2.85
<u>Week ended</u>								
			1969			1970		
			May 17	June 14	July 12	May 16	June 13	July 11
<u>Dollars</u>								
<u>Shipping point</u>								
Onions, medium-maximum	Texas	50 lb. sack	1.47	---	2.15	2.01	---	2.58
Onions, medium-maximum	California	50 lb. sack	---	1.54	2.12	---	2.00	2.02
Watermelons	Florida	25 lb. av. and larger,	4.23	2.61	1.75	5.93	2.11	1.89
		per cwt.	---	---	---	---	---	---
			---	---	---	---	---	---

Prices from Market News Service, C&MS, USDA.

Table 11.--Canned vegetables: Commercial pack and canners' seasonal supply, shipments to July 1, stocks July 1, and total seasonal shipments, selected commodities

Commodity and season	Carryover	Pack	Seasonal supply	Shipments to July 1	Stocks July 1	Total seasonal shipments
<u>Million cases 24/303's</u>						
Asparagus						
1966-67	1.2	7.9	9.1	1/3.7	2/5.4	7.5
1967-68	1.6	6.6	8.2	1/2.9	2/5.3	6.8
1968-69	1.4	6.9	8.3	1/2.7	2/5.6	6.9
1969-70	1.4	n.a.	n.a.	n.a.	n.a.	n.a.
Beans, lima						
1966-67	.1	3.5	3.6	3/2.8	2/.3	3.3
1967-68	.3	4.0	4.3	3/2.8	2/1.0	3.3
1968-69	1.0	3.8	4.8	3/2.9	2/1.3	3.5
1969-70	1.3	3.6	4.9	n.a.	n.a.	n.a.
Beans, snap						
1966-67	7.2	40.5	47.7	43.8	4.6	43.8
1967-68	4.6	53.2	57.8	46.4	11.4	46.4
1968-69	11.4	51.8	63.2	49.4	13.4	49.4
1969-70	13.4	47.5	60.9	n.a.	n.a.	n.a.
Beets						
1966-67	2.1	11.4	13.5	11.3	2.2	11.3
1967-68	2.2	11.8	14.0	12.3	2.5	12.3
1968-69	2.5	14.6	17.1	12.4	4.7	12.4
1969-70	4.7	n.a.	n.a.	n.a.	n.a.	n.a.
Carrots						
1966-67	1.1	7.1	8.2	6.1	2.1	6.1
1967-68	2.1	5.5	7.6	5.9	2.3	5.9
1968-69	2.3	5.1	7.4	4.9	2.5	4.9
1969-70	2.5	n.a.	n.a.	n.a.	n.a.	n.a.
Corn, sweet						
1966-67	1.2	45.5	46.7	44.1	2.6	45.4
1967-68	1.3	49.3	50.6	44.2	6.4	46.3
1968-69	4.3	59.3	63.6	51.2	12.4	53.3
1969-70	10.3	49.4	59.7	n.a.	n.a.	n.a.
Peas, green						
1966-67	5.7	31.9	37.6	4/33.7	5/3.9	33.7
1967-68	3.9	37.7	41.6	4/35.0	5/6.6	35.0
1968-69	6.6	36.2	42.8	4/34.5	5/8.3	34.5
1969-70	8.3	32.1	40.4	4/34.1	5/6.3	34.1

1/ Shipments to August 1.

2/ August 1.

3/ Shipments to May 1.

4/ Shipments to June 1.

5/ June 1.

n.a. - not available.

Table 12.--Vegetables, frozen: United States commercial packs
1968 and 1969, and cold storage holdings,
July 1, 1970, with comparisons

Commodity	Packs		Cold storage holdings		
	1968	1969	July 1 1968	July 1 1969	July 1, 1970 1/
	<u>Million pounds</u>				
Asparagus	34.4	23.0	35.0	25.8	20.0
Beans, lima:					
Fordhook	81.0	60.0	23.5	30.6	31.8
Baby	84.5	82.6	35.7	46.4	38.5
Total	165.5	142.6	59.2	77.0	70.3
Beans, snap:					
Regular cut	138.5	117.8	58.1	68.2	45.6
French cut	65.5	62.0	20.6	22.0	16.1
Wax	6.5	5.4	n.a.	n.a.	n.a.
Total	210.5	185.2	78.7	90.2	61.7
Broccoli	173.0	153.8	83.2	48.7	57.8
Brussels sprouts	49.0	40.1	21.9	19.1	14.1
Carrots	162.3	150.9	34.0	47.6	46.7
Cauliflower	67.6	69.7	11.8	15.9	15.8
Corn, cut	334.5	289.3	79.7	122.9	119.6
Corn-on-cob	76.4	73.9	2/	2/	6.5
Mixed vegetables	3/132.9	3/118.3	34.1	34.3	35.4
Peas	429.3	367.3	198.6	232.4	194.8
Peas and carrots	3/36.1	3/32.2	14.5	15.1	11.5
Pumpkin and					
squash	24.7	26.1	4/	4/	4/
Rhubarb	6.2	7.6	4/	4/	4/
Spinach	154.0	107.2	105.3	72.8	92.2
Succotash	3/8.2	3/6.5	4/	4/	4/
Kale	4.7	4.8	4/	4/	4/
Okra	30.5	38.2	4/	4/	4/
Peas, blackeye	25.6	20.6	4/	4/	4/
Turnip greens	20.6	19.9	4/	4/	4/
Miscellaneous					
vegetables	153.0	146.6	182.6	172.5	179.5
Total	2,121.8	1,866.8	938.6	974.3	925.9
Potato Products	1,736.0	2,048.4	370.0	435.4	478.9
Grand total	3,857.8	3,915.2	1,308.6	1,409.7	1,404.8

1/ Preliminary. 2/ Corn-on-cob included with cut corn. 3/ Considered as repacks and not included in total. 4/ Included in miscellaneous vegetables.

n.a. - not available.

Pack data from American Frozen Food Institute. Stocks from Cold Storage Report, SRS, USDA, issued monthly.

Table 13.--Vegetables for processing: Planted acreage and production, average 1964-68, annual 1969 and indicated 1970

Crop	Planted acreage				Production 1/	
	Average 1964-68	1969	Indi- cated 1970	1970 as percentage of 1969	Average 1964-68	1969
	- - - 1,000 acres - - -				Percent	- - 1,000 tons - -
For freezing:						
Green lima beans	64.7	57.4	47.1	82	74.4	69.4
Snap beans	62.7	50.5	50.2	99	132.2	113.9
Sweet corn	117.6	118.0	96.1	81	536.5	623.7
Green peas	169.4	161.0	146.1	91	214.9	208.4
For canning:						
Green lima beans	32.7	31.6	27.8	88	27.7	28.3
Snap beans	202.1	200.3	190.5	95	427.0	451.6
Sweet corn	349.3	347.4	335.8	97	1,391.1	1,462.8
Green peas	303.1	280.3	364.1	130	338.3	316.3

1/ 1970 production for canning and freezing will be published in December annual summary.

Vegetables-Processing, SRS, USDA, issued monthly.

Table 14.--Potatoes, Irish: Acreage, yield per acre, and production, average 1964-68, annual 1969 and indicated 1970

Seasonal Group	Acreage		Yield per acre		Production		
	Harvested	For harvest	Average 1964-68	1969	Indi- cated 1970	Average 1964-68	1969
	Average 1964-68	1/	1970	1/	1970	1/	1970
- - - 1,000 acres - - -							
Winter	22.0	19.8	18.8	195	193	184	4.3
Spring							
Early	31.9	32.5	29.7	138	175	162	4.4
Late	96.4	88.5	81.2	234	241	255	22.6
Summer							
Early	83.0	84.8	80.5	158	159	151	13.1
Late	128.9	116.9	116.6	225	249	251	29.0
Total with pro- duction to date	362.2	342.5	326.8	203	214	215	73.4
Fall							
8 Eastern	277.6	271.0	268.6	234	229	---	64.9
8 Central	304.1	298.2	303.2	157	172	---	47.7
9 Western	443.7	501.7	534.5	229	250	---	101.5
Total	1,025.4	1,070.9	1,106.3	209	223	---	214.1
United States	1,387.6	1,413.4	1,433.1	207	221	---	287.4

1/ Revised.

Crop Production, SRS, USDA, issued monthly.

Table 15.--Potatoes: Prices f.o.b. shipping points and wholesale price at New York and Chicago, U.S. No. 1 indicated periods 1969 and 1970

Item	State	Week ended						
		1969			1970			
		May 17	June 14	July 12	May 16	June 13	July 11	
<u>Dollars per 100 lb. sack</u>								
<u>F.o.b. shipping points</u>								
Kern County	California							
		3.98	3.35	2.18	3.85	3.25	4.75	
Perris-Chino	California							
		---	---	2.72	---	---	4.75	
Eastern points	Alabama							
		---	3.10	3.05	---	4.35	4.72	
Long Whites	Maryland							
		---	---	2.60	---	---	4.18	
Long Whites	Virginia							
		---	---	---	---	---	---	
<u>Tuesday nearest mid-month</u>								
		1969			1970			
		May 13	June 17	July 15	May 12	June 16	July 14	
<u>Dollars per 50 lb. sack</u>								
<u>Terminal markets</u>								
New York	California							
		---	3.35	3.15	---	3.40	3.85	
Long Whites	Maine							
		1.70	1.95	1.90	2.25	3.15	2.50	
<u>Dollars per 100 lb. sack</u>								
Chicago	California							
		---	5.40	4.50	6.35	5.75	7.35	

F.o.b. prices are the simple averages of the mid-point of the range of daily prices. Market prices are for Tuesday of each week, and are submitted by Market News representatives to the Fruit and Vegetable Division of C&MS.

Table 16.--Sweetpotatoes: Representative wholesale price (l.c.l. sales) at New York and Chicago for stock of generally good merchantable quality and condition (U.S. No. 1, when available) indicated periods, 1969 and 1970

Item	State	Tuesday nearest mid-month						
		1969			1970			
		May 13	June 17	July 15	May 12	June 16	July 14	
<u>Dollars per 50 lb. container</u>								
<u>Terminal markets</u>								
New York	North Carolina							
		5.12 $\frac{1}{2}$	4.50	4.75	5.00	7.50	9.00	
Porto Rico	Louisiana							
		5.35	5.25	5.25	6.35	8.00	7.75	
Chicago	Porto Rico, cured							
		---	---	---	---	---	---	

Prices submitted for Tuesday of each week by the Market News representative at New York and Chicago.

Table 17.--Beans, dry edible: Acreage, yield per acre, and production, average 1964-68, annual 1969, and indicated 1970 1/

Group, State and classes	Acreage		Yield per acre			Production <u>2/</u>		
	Harvested		For harvest	Average 1964-68	1969	Indicated 1970	Average 1964-68	1969
	Average 1964-68	1969	1970					
	<u>-- 1,000 acres --</u>			<u>Pounds</u>			<u>1,000 cwt.</u>	
Michigan	600	671	637	1,196	1,210	1,350	6,685	8,119
New York	90	77	78	1,202	1,150	1,250	1,064	886
Northwest <u>3/</u>	282	270	296	1,594	1,735	1,708	4,494	4,684
Southwest <u>4/</u>	222	259	283	923	838	891	2,050	2,170
California:								
Large lima	44	45	34	1,643	1,710	1,700	723	770
Baby lima	19	26	24	1,784	1,655	1,780	339	430
Other	142	133	126	1,349	1,305	1,335	1,916	1,736
Total California	205	204	184	1,453	1,439	1,460	2,978	2,936
United States	1,399	1,481	1,478	1,235	1,269	1,342	17,271	18,795
								19,840

1/ Includes beans grown for seed. 2/ Cleaned basis. 3/ Nebraska, Montana, Idaho, Wyoming, Washington, Minnesota, and North Dakota. 4/ Kansas, Colorado, New Mexico, and Utah.
Crop Production, SRS, USDA, issued monthly.

Table 18.--Peas, dry field: Acreage, yield per acre, and production, average 1964-68, annual 1969, and indicated 1970 1/

State	Acreage		Yield per acre			Production <u>2/</u>		
	Harvested		For harvest	Average 1964-68	1969	Indicated 1970	Average 1964-68	1969
	Average 1964-68	1969	1970					
	<u>-- 1,000 acres --</u>			<u>Pounds</u>			<u>1,000 cwt.</u>	
Minnesota	7	6	7	1,160	1,450	1,200	79	87
North Dakota	4	2	2	1,274	1,300	1,300	55	26
Idaho	100	114	116	1,656	1,700	1,600	1,660	1,928
Washington	126	155	164	1,658	1,670	1,450	2,075	2,588
Oregon	10	11	14	1,330	1,600	1,400	136	176
United States	247	288	303	1,621	1,672	1,498	4,005	4,815
								4,540

1/ In principal commercial producing States. Includes peas grown for seed and cannery peas harvested dry.

2/ Cleaned basis.

Crop Production, SRS, USDA, issued monthly.

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